



SECURITY PRODUCTS

DX-TL910U

Digital Video Recorder
Technical Specifications

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(6/23/04)

1. Digital Video Recorder:

The unit shall be a Digital Video Recording (DVR) device with the functionality of a 9-camera video multiplexer. The unit shall use wavelet compression and support 5 record quality grades. The unit shall be a Mitsubishi Imaging Products model DX-TL910U.

- a. The unit shall be fully multitasking/Duplex, able to perform recording, playback, archiving or coping at the same time.
- b. The unit shall incorporate a total of 250GB or 500GB of hard disk space for storing recorded images. One CFC slot will be provided for updating firmware, system menus or coping needed information.
- c. The unit shall feature time base correction, eliminating the need for external camera synchronization.
- d. The DVR shall support Proprietary OS and NOT be PC based.

2. Technical Specifications:

- a. The DVR shall measure 300(W)X350(D)X88(H) mm
- b. The DVR shall have an operating temperature 5-40 degree Celsius
- c. The DVR shall operate at a relative humidity rate of 80% humidity
- d. The DVR shall weigh about 14lbs.
- e. The DVR shall be the following Mitsubishi model with installed HD capacity.
 1. DX-TL910U – 9 channel Digital Video Recorder, with 250GB of internal HDD capacity
 2. DX-TL910U-370 - 9 channel Digital Video Recorder, with 370GB of internal HDD capacity.
 3. DX-TL910U-500 - 9 channel Digital Video Recorder, with 500GB of internal HDD capacity

3. Installation:

- a. The DVR shall auto-detect all color or monochrome cameras connected
- b. The DVR shall have 9 composite BNC inputs and 9 BNC lopping outputs with built in auto termination.
- c. The DVR shall automatically adjust daylight savings (DST) with out operator intervention.
- d. The DVR shall be upgradeable via CFC, or remotely via network.
- e. The DVR shall support 10Base-T networks

4. Operations:

- a. Operations of the DVR shall be from the front or via network connection.
- b. The DVR shall have an easy to follow paged menu system, which can be set to English, Spanish o French.

5. Screen Modes:

- a. The DVR shall support programmable dual monitor outputs, a primary and secondary or spot monitor.
- b. The primary monitor output shall support S-Video or Composite video output, also provide full screen, sequential full screen, quad, or 9 multi screen displays.
- c. The secondary monitor output shall be used for Live display only and support Composite video output. Display patterns will consist of full screen, sequential full screen, quad or 9 multi screen displays.
- d. The DVR shall have digital ZOOM 2X and 4X power. Zoom shall be available for live or playback, local or via network. The zoomed area shall be selectable, being able to move around the viewing area.
- e. The DVR shall support digital freeze image and image by image forward and reverse advancement.
- f. The DVR shall be capable of displaying user definable cameras in single, quad, or 9 display modes.

6. Recording and Playback:

- a. The DVR shall record and playback at the same time.
- b. The DVR shall record any and all camera inputs as full screen images.
- c. The DVR shall record up to 30 images (pictures) for one camera and up to 60 images when two or more cameras are connected.
- d. The DVR shall have per camera variable record rates and variable record quality allowing the user to program each camera independently.
- e. The DVR shall provide user programmable up to 16-character title for each camera and shall provide the ability to record time and date and title with each image.
- f. The DVR shall playback in full, quad, or 9 images along with full sequence and sequence multi display patterns.
- g. The DVR shall be able to search by time and date, alarm number, and alarm index. Also, skip search for fast reviewing shall be supported.
- h. The DVR shall be able to playback, pause, reverse play, forward play and image by image advance and four forward or reverse speed search. The DVR review speed shall also have the ability to be set by user.
- i. The DVR shall have an event log, displaying every event recorded on disk.
- j. The DVR event log shall be searchable by time and date, camera type, index, and quick alarm display.
- k. The DVR shall have the ability to protect alarm and activity recording on separate partitioning of the disk. The partition shall be configurable in GB and have the ability to overwrite it self.

7. Password:

- a. The DVR shall support 3 user-defined password settings each allowing specific access levels to the unit functions, menu and hidden cameras.
- b. The DVR shall support a simple LOCK ALL function, which when activated locks all buttons accept for Split/Sequence, Zoom and camera buttons.

8. Copying:

- a. The DVR shall be able to copy to Compact Flash Card, or to a VCR via front video outputs or on a two HDD system Mirroring of one drive to another will be supported.
- b. The DVR must be able to Copy, REC. and Playback at the same time.
- c. A digital signature must be applied to all images, sequence of images recorded on the DVR.

9. Scheduling:

- a. The DVR shall have a user definable schedule to switch to day, night, weekends and holidays. This schedule shall support 3 user definable patterns.
- b. The DVR shall allow user definable pattern settings for camera, record rate, record quality, alarm record rate and quality, archiving, skip and motion activation.
- c. The DVR shall automatically adjust daylight savings time (DST) with out any operator intervention.

10. Alarm Relays:

- a. The DVR shall provide Alarm and Alarm Plus Normal activity-recording options. Alarm shall record images from those cameras in an alarm activity condition. Alarm Plus Normal shall prioritize the recording of those cameras in an alarm activity condition, while recording images of none alarm cameras.
- b. The DVR shall have the ability send a message on alarm or camera fail.
- c. The DVR shall have an Emergency Alarm input, forcing alarm recording for all camera inputs.
- d. The DVR shall have an event log list for all the alarm activities recorded on the hard disk, providing time date, camera and type of event.
- e. The DVR log list shall be searchable by time and date, camera number, index mark and provide a quick search function playing back 5 seconds of the recorded information.
- f. The DVR shall be able to notify up to 5 e-mail addresses of an alarm occurrence. The alarm shall be triggered when signal from a camera occurs, camera input loses signal, Alarm Sense, or REC. Mode is activated.
- g. The DVR shall have activity detection per camera input and able to trigger an alarm when activity or movement (change) occurs in selected area. Each input setting shall be independent from all others.
- h. The DVR shall have nine alarm trigger input relays which when activated can trigger an alarm condition.
- i. The DVR shall have nine programmable alarm inputs
- j. The DVR shall support independent or global alarm recording when an alarm occurs.
- k. The DVR shall support setting of motion alarm triggering from scheduling.

11. Video Motion Detection:

- a. The DVR shall provide programmable activity detection per channel with a 16X12 grid that can be set individually supporting up to 5 sensitivity levels and a triggering threshold setting from 1 to 192. Each setting shall support a test mode for testing set settings.
- b. The DVR shall have the option to sound a buzzer on activity.
- c. The DVR shall use motion detection as one of its methods of recording an alarm.

12. Covert Cameras:

- a. The DVR shall support covert cameras via any camera connected. Activation for this menu shall be hidden from standard menu settings.

13. Digital Signature:

- a. The DVR shall apply a digital signature to recordings and to internal and external hard disk without affecting performance, allowing the authenticity of the digital multiplexed recorded image to be verified.

14. Audio:

- a. The DVR shall record audio for one channel.

15. Network Capabilities:

- a. The DVR shall support LAN and WAN connection via Web Browser or Application software.
- b. The DVR shall have the ability to connect to a 10Base-T Ethernet network
- c. The DVR network software shall be included with each unit and will be license free to the end user.
- d. The DVR network software shall support duplex operation enabling Record and Playback information at the same time.
- e. The DVR network software shall support viewing hidden cameras over the network by authorized personnel.
- f. The DVR network software shall provide access to the units event list and its associated video.
- g. The DVR network software shall support storing of digital images to a PC HDD.

Network Capabilities (cont'd):

- a. The DVR network software (DX-PC25U) will support up to 5 remote operators to view live or pre-recorded images across a network.
- b. The DVR network software shall be fully re-sizeable to full screen viewing.
- c. The DVR network software shall support up to 5 user selectable resolution settings.
- d. The DVR network software shall support color or monochrome video settings for video transmission.
- e. The DVR network software shall have an option to set password to prevent unauthorized user viewing of live, recorded images, controlling the unit, changing the menu system, configuring the network settings and viewing hidden cameras.
- f. The DVR network software shall support Windows 98SE, WIN2000 and WIN XP.

- g. The DVR network software will support full or partial access to the units various menus and control levels dependent on password protection.
- h. The DVR network software shall support system adjustments over the network.
- i. The DVR network software shall support changes to the DVR menu while displaying live images in the selected display background.
- j. The DVR network software shall be able to convert original wavelet images to JPEG or AVI format.